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The Lesson of the Daisies.

NO one who has chanced to make a somewhat extended tour through the farm-lands of any part of the middle states during the last of June or the first of July can have failed to notice how large a fraction of the area was white for the harvest—a harvest not of grain, but of Ox-eye Daisies. Fields of Buckwheat at the height of their bloom were never whiter than many lowlands which once were rich meadows, and many hillsides which once were rich pastures. The daisies are so prevalent and luxurious this year that a stranger might suspect that all the farmers had gone into the business of floriculture, but a few questions will soon dispel this illusion, for the growers of the Daisies very rarely appreciate their beauty. It is a genuine and destructive invasion, and yet the Daisies have not conquered the meadows; they have merely stepped in to occupy and possess the soil which the grass had abandoned. The worst of it is that the great majority of the tillers of the soil do not apprehend the true condition of things, and while they bewail the fate which forces them to harvest daisies instead of grain or hay, they do not realize the fact that they have invited the attack and encouraged the invaders.

Occasionally a farmer is heard to ask how these weeds can be killed, but he does not realize that if by some rapid process they could all be dispatched new legions would fill their places at once if the conditions which they enjoy remain. What farmers need to comprehend is that without some radical mistake in the management of their land the Daisies never would have gained such a foothold. All plants, including weeds, settle and thrive where the competition for life is such that they can enter into it and prosper. A good stand of Grass leaves no room nor any hope for weeds. It is not in well-tilled fields that Canada Thistles flourish, but in neglected pastures and by the roadsides. In the contest with the best agricultural practice they cannot prevail. It is in the untilled plains of the west or in the tilled regions where there is mile after mile of plowed land producing only eight or nine bushels of wheat to the acre year after year, without any rotation, where the Russian Thistle is a natural and inevitable intruder.

The remedy for weeds is to keep the land busy with a good crop on it, and this means that the farmer must give persistent and connected thought to his business. If the Daisies crowd out the Grass, it is because the meadow has been neglected and the grass has begun to fail, and wherever there is a vacancy by the failure of the grass every enterprising weed finds a rightful opportunity to establish itself. If the farmer asks, therefore, what will kill the Daisies, there is one answer: better farming. Weeds find nourishment and a home wherever there is waste ground, which means ground not profitably occupied. Widespread areas of Daisies, Buttercups, Wild Carrots, Mustards and the like are, therefore, the types and measures of the prevailing ignorance of farmers respecting the very fundamental principles of their calling. The one good thing that weeds can accomplish is to prove by their presence that there is a weak point in the established system of agriculture; the only way to turn their visits to advantage is to heed this instruction by revolutionizing farm practice and organizing some profitable rotation which will exclude them.

If farmers cannot interpret the teachings of the weeds it certainly would be advisable for the agricultural experiment stations to help them in this particular. The existence of these invaders means that what the farmers of these states primarily need is more instruction in fundamental matters concerning the handling of their land. We are glad, therefore, to see that many of the stations are turning to this subject, and that they are doing more than merely furnishing botanical descriptions of the various noxious plants. The Cornell Station, for example, in a bulletin entitled Reflections Upon Weeds, gives some sound primary instruction in agricultural science. It is to be hoped that both this station and others will continue work of this sort even if they forego to some extent experimentation in higher fields. So long as the farmer needs elementary teaching it ought to be furnished to him, even if takes the time of officials who ought to be searching for scientific truth. A late bulletin of the Geneva Experiment Station upon the principles which underlie the application of commercial fertilizers deals with the simplest matters, matters with which every intelligent farmer ought to be familiar, and yet there is no doubt that every word of it is needed. The time may come in America, as it has come in some older countries, when the common schools instruct children in the principles of agriculture—so that in fundamental points of practice the ordinary farmer will know what to do, and will be able to tell why he does it. Until that day arrives every effort to increase his knowledge of principles deserves encouragement.

AN interesting correspondence has been forwarded to us by Volney Rogers, Esq, one of the Park Commissioners of Youngstown, Ohio. An observing citizen who, Mr. Rogers says, is usually correct in his judgment on such matters, wrote him to call attention to the destruction of several large Hemlocks in the beautiful park of that city, adding that the injury was caused by the work of the yellow-bellied sapsucker. He therefore suggested the employment by the Park Board of an active young man with a small-bore shot-gun to thin them out. Mr. Rogers replied that, in his opinion, the Hemlocks have been dying partly because of two dry seasons, and partly because they have been thinned out for driveways, so that their trunks and roots have been exposed to the sun. He added that sometimes roots of considerable size have been cut along the paths and drives, and this mutilation may have weakened the trees. Fires have also swept through the timber in certain places.

Of course, it is not safe to pronounce an opinion on a question like this without closer investigation, but we should advise Mr. Rogers to keep the "active young man with the small-bore shot-gun" out of his Hemlock groves

and encourage the birds to come there and stay. The sapsucker, Sphyrapicus varius, does drill holes in trees for the purpose of getting the elaborated sap and parts of the cambium layer, and in very exceptional cases quite young trees have been injured by them. The damage, however, is too insignificant to justify the persecution of these birds in view of the immense benefit they do in other ways. In Ohio the bird is only a migrant, at all events. Mr. Frank Bolles (see *The Auk*, vol. viii., July, 1891) concludes that while in their breeding-grounds these birds may sometimes destroy forest-trees, the damage is insignificant in a well-wooded region. Moreover, it is certain that the sapsucker, or yellow-bellied woodpecker, is the only species at all guilty. Now, the active young man with a shot-gun would undoubtedly kill every kind of woodpecker he saw; indeed, many other species are called sapsucker; for instance, the downy woodpecker and the hairy woodpecker, and both of them are very beneficial to trees. The public need instruction as to the value and preservation of these birds much more than they need encouragement to destroy them. When we think how much the entire agricultural interest of the country, and all that this implies, depends on the activity of birds, it is enough to lead one to take their side in every case where their habits are called in question.

On the other hand, the Hemlock is one of the trees which are particularly sensitive to any change of their surroundings like the cutting away of trees, so as to let in the wind and sun. Besides this, all trees are very impatient of changes in the water-content of soils where they have become established. If the water is increased about their roots by damming, or if by draining it is taken away from them, they invariably suffer, and many species will never recover from a shock of this sort or live long enough to adapt themselves to new conditions. We apprehend that Mr. Rogers is correct in attributing the destruction among the Youngstown Hemlocks to the hand of man rather than to the pecking of birds.

Plant Names of Indian Origin.—IV.

Pipsissewa, or Pipsiseway (Chimaphila umbellata).—This is a word of Cree (Algonk.) origin, and, giving the letters the value that they have in English, should be spelled *pisisiwayoo*. It means "he reduces it to very small particles." In Algonkin grammar, an inanimate object (such as a plant, for example) cannot be the subject of an active verb, and, since, in the word under consideration, the agent is an animate being, the name must have been transferred to the plant from that of some Indian medicine man who had obtained a reputation from his use of the herb as a lithontriptic in the treatment of gravel. The name, therefore, belongs to the same category of words as Joepye, or Jopi, which was applied in New England to Eupatorium perfoliatum, from an Indian so called. This name is apparently a corruption of a word meaning "he makes liquid hot," alluding to this Indian's use of hot infusions of the plant in order to induce profuse perspiration in the treatment of typhus.

Powitch (Pyrus rivularis).—A Chinook Jargon word often used with the adjunct tree. It is from the Chinook name of the tree, *páwitsh*, or *páwutsh*.

Poke (Phytolacca decandra).—An abbreviation of Powhatan *pokan*, or *pokone;* the same word as Puccoon, *q. v.* The name as applied to Symplocarpus fœtidus is English, and the application of it to Veratrum viride is due to the latter being confused with the former, owing to the fact that the two plants often grow in company, and, to the unpracticed eye, bear a slight resemblance to each other in early spring when their leaves first appear. Hence both have received the same popular names.

Puccoon (Lithospermum canescens and Sanguinaria Canadensis).—From Powhatan (Algonk.) *pokone*, which is from (or from the same root as) an Algonkin name for "blood." Strachey (*Travaile into Virginia*) describes "Pocones, a small root that groweth in the mountains, which being dried and beat into powder, turneth red," etc.; and his editor (R. H. Major) notes that this is the "Anchusa Virginiana of Linnæus," quoting from Plukinet: "*Puccoon* indigenis dicta quâ se pingunt Americani." Clayton's *Flora* assigns the name to Sanguinaria. In the north it has generally been given to Lithospermum canescens, though it must be regarded as a general name for plants that yield a red dye.

Potato (Solanum tuberosum).—Through Carib-Span. patata, from Taino (Haytian Carib) *batata*, Batatas edulis, from which the name seems to have been transferred to the tuber now so called by John Gerard, "because," as he says, "it hath not onely the shape and proportion of [sweet] Potatoes, but also the pleasant taste and vertues of the same" (*Herbal.*, p. 927).

Sego (Calochortus Nuttalli).—A Pai Ute word, generic with these Indians and others of the same (Shoshonean) linguistic stock, for edible bulbous roots. The word is sometimes spelled Sago.

Senega, or Seneka.—Polygala Senega, from the use of its root as a remedy for snake bite among the Seneka Indians, attracted the attention of Dr. Tennant, of Virginia, in 1734, who brought it to the notice of Dr. Mead, of London, in 1738. It was at that time called Senega rattlesnake-root. If, as is sometimes stated, the plant was so called after the Seneka Indians, the word is not of aboriginal origin, since the name by which they are known in English is a corruption of one applied to them by the Dutch settlers, their Iroquoian appellation being Tsinontowanehaka, "inhabitants of the great mountains." Charlevoix, however (1720–22), speaking of the name of the plant, says: "C'est apparement le nom que lui donnent quelques sauvages"; and Clayton (*Flor. Virgin.*, 1743) says: "Seneca Indis Pensilvan." Clayton's statement would make the word either Iroquois or Algonkin. If Algonkin, it belongs to the Delaware dialect, and is either from *'sinnegayoo*, "it is stony," or an abbreviation of *'sinnegepin*, "stony root," alluding to the hard knotty character of the plants' root-stocks, the medicinal part. Again, Adair (*Hist. of American Indians*, 1775) mentions the word *seneeka* as the Cherokee name of the "fern snake-root" (Botrychium Virginicum?). The Cherokees belong to the Iroquoian family. The true origin of the name Senega, or Seneca, is therefore doubtful.

Salal, or Sallal (Gaultheria Shallon).—A Chinook Jargon word, from the last two syllables of *klkwu-shâla*, the Chinook name of the fruit of the plant.

Saskatoon, or Skatoon (Amelanchier Canadensis).—A corruption of eastern Cree (Algonk.) *misâskawatomin*, the fruit of the *misâskwat*, a word meaning "it is much wood," or "entire wood," which may allude to the quantity of wood available for making arrows that the tree yields. The wood is highly prized by the Crees for this purpose, as well as for making pipe stems.

Savoyan (Galium boreale, G. trifidum and Coptis trifolia).—From Algonk.-French savoyanne, formerly tisavoyanne, from Micmac *tissawhianne*, "skin-dye." The plants above named were used by the Indians of Canada for coloring articles which they made of prepared skins.

Skoke (1) (Phytolacca decandra).—From Natick (Algonk.) *m'skoki*, "red," "bloody," alluding to the color of the juice yielded by the fruit. (2) Symplocarpus fœtidus. The name, as applied to this plant, is an abbreviation of Delaware (Algonk.) *skwâkwinzh*, "skunk-weed." Skoka is a variant of the name.

Sotol (Dasylirion Texanum)—Through Spanish, from Aztec *sotolin*, a word compounded of *soll*, "linen," and *tolin*, "bulrush," from the linear leaves of the plant, and, probably, the economic use made of its fibre.

Squash (Cucurbita Melopepo and C. verrucosa).—An abbreviation of Narragansett (Algonk.) *askútasquash*, plural of *askútasq*. "Askútasquash, their vine apples, which the English from them [the Narragansetts] call squashes" (*A key into the language of America.* Roger Williams, 1643). Both the first and last syllables of the word belong to the

same root, meaning "immature," "unripe," "green." From *askul*, the stem of *askutu*, "it is immature," "it is green," with the formative suffix *asq*, we have *askulasq* as the name for a cucurbit that might be eaten while in a green or unripe state.

"Whereas the Pompion is never eaten till it be ripe, these [squashes] are never eaten after they are ripe" (Beverly's *Hist. of Virginia*).

TACAMAHAC (1) (Populus balsamifera).—A West Indian (Aruban?) name for a balsamic resin derived from Elaphrium tomentosum, transferred to a resin produced by the Balsam Poplar, and then to the tree itself. (2) (Larix Americana). As in the preceding case, a transfer to the tree of the name given to a balsamic turpentine yielded by it, and used medicinally for the same purposes as the tacamahac of commerce, the properties of which are analogous to those of the turpentines.

New York. *W. R. Gerard.*

The Oaks at Paxtang.

"BETWEEN South Mt. and the Endless Mountains lies the most considerable body of valuable land the English are possessed of . . . This valley is everywhere enriched with limestone. The Endless Mountains come next in order, ridges with even tops and nearly of a height, and to look into the lower lands is but, as it were, into an ocean of woods, swelled and depressed here and there by little inequalities, not to be distinguished one part from another any more than the waves of the ocean." —*Analysis of a Map of the Middle British Colonies in America*, by Lewis Evans, Philadelphia, 1755.

A remnant of the once immense Appalachian forest survives in the venerable Oaks at Paxtang, Pennsylvania, that curiously enough owe their preservation to the very men who made the first clearing in the "ocean of woods" covering that part of the Great Vale which extended from the Schuylkill to the Susquehanna, and known as the Lebanon Valley. The land where they settled, at the western end of the Lebanon Valley, a few miles south of the Endless Mountains, and not far from the Susquehanna, formed part of the disputed territory bought from the Shawanese in 1696, but was not finally ceded to the English until 1736. Years before this last treaty was signed John Harris had established his trading-post on the river, and of several settlements made by Scotch-Irish Presbyterians, one of the earliest was the then frontier settlement of Paxtang, in a minor depression or "inequality" of the valley.

By 1732 there had been such an increase in numbers at Paxtang, and Derry, ten miles eastward, that the congregations united in calling the Rev. John Bertram as joint pastor, and for a time each congregation worshiped in its own log meeting-house. The one at Derry satisfied its people for generations, but the primitive structure at Paxtang was replaced under the energetic ministry of the celebrated Parson Elder by the existing stone church, whose corner-stone was laid in 1740. Lineal descendants of the founder and builders compose most of its present congregation.

The land originally granted to the church consisted of one hundred acres, at half-pence sterling rent. This acreage was afterward reduced to twenty, and at present the church holding does not exceed eight acres in extent. It lies near the crest of the northern slope of the valley, and except for the portions occupied by the parsonage and grounds, the myrtle-covered graveyard, and the church, with its surrounding open space, is entirely in woodland. The woods are of mixed species and not at all noteworthy, except for the Oaks, which literally overshadow the other trees to such an extent that they form no part of the impression. There are six White Oaks, with trunks ranging from more than three to nearly five feet in diameter. The largest one, the subject of the photograph reproduced on page 295 of this issue, measures four feet eight inches, and stands not far from the front entrance to the building. Two others are near the lower margin of the woods, and another, near the graveyard, screens the silent past from the too close approach of the busy present, which with house-lots and avenues touches the very border of the church enclosure.

From the margin of the woods there is a beautiful outlook into the valley over the surrounding country, and across the river to the broken spurs of the South Mountains, known as the York Hills. While the valley itself has developed into a succession of suburban villages, country seats and model farms, the Oaks, and the church they surround, have changed little since colonial days. The church is built of limestone, which does not ring much harder than the mortar cementing its blocks, and though the interior has been remodeled in accordance with modern ideas, the exterior was fortunately left intact, and preserves the uncompromising severity of its original lines. John Bartram, in his journeys through the Great Vale, often passed close to the Oaks, but it is doubtful if he ever lingered at Paxtang, as he had no love for the Scotch-Irish, and the only feeling he held in common with that fighting race was the wish "to bang the Indians stoutly."

In 1763 the Oaks looked out over a turbulent scene, as the Paxtang Rangers, disregarding the protests of their venerable Parson Elder rode off to Conestoga to deal punishment to the Indians who they thought had been treated too leniently by the authorities. The leader of this expedition was the same Capt. Smith who, twelve years later, and within ten days after the news was received of the battle of Lexington, had ready armed and equipped for service the company that was the second to reach Boston from south of the Hudson. This same company formed part of Arnold's expedition to Canada, and some of the members never returned from the assault on Quebec.

Generation after generation has passed out from under the shadow of the Oaks into the world, and the recent Scotch-Irish Congress, held in Harrisburg, has drawn attention to the veneration with which this church is regarded, a feeling intensified by the unchanged state of its immediate surroundings, and especially by the presence of its noble Oaks.

Harrisburg, Penn. *M. L. Dock.*

Foreign Correspondence.

London Letter.

A FARM SCHOOL.—The present Duke of Bedford takes a keen interest in the agriculture and market-gardening of this country. Several years ago he established in Woburn, Bedfordshire, an experimental fruit-farm for the purpose of demonstrating new methods of culture and bringing into notice good varieties of all kinds of hardy fruits suitable for cultivation by farmers and others. He has lately added to this generous gift by placing at the disposal of the County Council a farm of 275 acres close to the Woburn fruit-farm, and has erected lecture-rooms, dormitories and other accommodation for the education of boys in the science and practice of farming. Every branch of farm and garden practice is taught by precept as well as by practice. The boys are granted free scholarships by the County Council; in other words, they are to be taught and housed free of charge for a period of two years. They are selected from the sons of agricultural laborers and small farmers. This school-farm, which is modeled on the lines of similar institutions on the Continent, is said to be the first of the kind ever established in this country.

SEEDLING ORANGES.—An interesting report by Mr. H. J. Webber, to the United States Department of Agriculture, dealing with the reproduction of varieties of Orange and other members of the Citrus family in Florida, is reprinted in *The Gardeners' Chronicle*. It is noteworthy on account of its setting forth that the varieties of Citrus are reproduced true from seed, in opposition to the general belief that good commercial varieties of Orange, Lemon, Lime, Shaddock,

etc., can only be reproduced by grafting. I have been informed that the inferiority of the oranges sent to market from some of the islands of the West Indies is due to the neglect of the cultivators to perpetuate good varieties by means of grafting, relying only upon seedlings. To remedy this state of things select varieties have lately been introduced, and planters have grafted them upon the inferior stocks already established. If Mr. Webber's statements are correct, and they appear to be based upon careful observation, all this trouble is unnecessary. With regard to other selected varieties of fruits of similar character to Citrus—that is, Apples, Pears, Persimmons, Peaches, etc.—seeds are useless as means of reproduction. We should like to hear at greater length the experience of growers of choice oranges in the southern states.

Calceolaria alba.—This is a perennial herbaceous shrub which at Kew has grown from a seedling to a wide bush five feet high in two years. It is planted against a south wall which affords it a little protection in winter; whether it is hardier than this has not yet been tested. At the present time it is beautifully in flower, and it promises to make a display for about two months at least. Probably it might be grown dwarfer and utilized as a summer bedding plant. The stems are slender, erect, at first green and succulent, becoming brown and woody with age; the leaves are linear, two to three inches long, and they bear a few marginal teeth on the upper half. The flowers are in erect terminal panicles, strong shoots bearing panicles a foot long and six inches wide, with about one hundred expanded flowers, which are pure white, half an inch in diameter, the lower lip or "purse" being much larger than the upper, and folding over so as to present the appearance of round, inflated white bags. The species is a native of Chili, from whence it was first introduced by Lobb, who sent it to Messrs. Veitch, with whom it flowered in 1844. It appears to have been again lost to gardens until recently, when Herr Max Leichtlin reintroduced it. Cuttings of it strike quite freely.

Escallonia Philippiana.—This beautiful hardy shrub was introduced from Valdivia in 1878, when it was described and figured by Dr. Masters in *The Gardeners' Chronicle*. It was discarded by some cultivators as being too tender, and by others as a poor unattractive shrub. A few, however, saw merit in it and kept it. I first saw it in full glory in a garden in Ireland three years ago, where it had grown into an elegant pyramidal bush ten feet high and was crowded with white star-like fragrant flowers in June. This year it has shown its full beauty at Kew, where it occupies two large circular beds skirting one of the principal walks. The shoots are elegantly curved, the leaves are small and they are almost entirely hidden by the myriads of white star-like flowers which clothe them from base to point. Their fragrance, too, is delightful. The effect of the Escallonia is heightened by the admixture of the flowers of Liliums, a common feature at Kew, almost every bed planted with low-growing shrubs having some species of Lilium growing happily with them. The Escallonia is not hardy in the north of England, but in countries where the winters are not severe it is an evergreen summer-flowering shrub of quite exceptional merit.

Rhododendron Smirnowii.—*The Gardeners' Chronicle* for this week contains a life-size picture of a flower-truss of this Rhododendron, which was introduced from the Caucasus by means of seeds sent from the Botanic Gardens, St. Petersburg, to Kew in 1886. The plants at Kew flowered for the first time in the open air in May, 1893, but this year the flowers have been larger and more attractive. They are similar in size and general appearance to the flowers of R. Catawbiense and colored a soft rose-purple, with a few dull red spots on the upper segment. The species is remarkable in having the under side of the leaves clothed with a thick felt-like layer of pale yellow wool, which becomes dull brown as the leaves get old. The plant grows slowly, branches early, is evergreen and quite hardy, and it possesses a special interest for the cultivator of Rhododendrons. As a breeder it is likely to prove valuable, and that it will cross with the garden Rhododendrons has already been proved at Kew, where there are now seedlings raised from an undoubted cross between it and some good varieties of the popular Catawbiense hybrids.

Waterer's Spiræa.—The most attractive shrub at Kew in July is this beautiful variety of Spiræa Bumalda. Beds of it twelve feet across in conspicuous positions on the lawns are covered with large flat trusses of glowing crimson flowers. With a little attention this effect may be retained till the autumn, the attention needed being nothing more than the removal of the old trusses as they fade. If these are cut away daily—"delightful occupation for the young ladies after breakfast," says my friend Mr. Waterer—the lateral shoots continue to push up fresh heads almost till the frost comes to stop them. As a pot-plant we have not found this Spiræa worth the trouble, but in beds and borders it has proved itself worthy of the recommendation given to it by its introducer, who sent it out as the best summer-flowering hardy shrub introduced in recent years. It is easily propagated from soft summer cuttings or by division.

Rose, Crimson Rambler.—The display made by this grand climbing Rose has been exceptionally brilliant for the past three weeks. Planted in a border among tall herbaceous plants, with a pole twelve feet high to support the stems, which are held loosely up by a kind of wire crinoline fixed to the pole, the shoots have formed a massive sheaf of rich green foliage and large clusters of flowers which can be seen "a mile off." For pillars or as a clothing to picturesque tree trunks no Rose can be more suitable. It must be planted in a rich deep soil and be kept watered in dry weather. The old shoots—that is, those that flowered last year—should be cut out or thinned out, so as to make room and throw vigor into the new shoots which are pushed up from the base, and grow to a height of ten or twelve feet in a few weeks. These stout Willow-like shoots produce the finest bunches of flowers. This thinning treatment is good for all the climbing Roses if abundance of bloom is required. I hear that some nurserymen supply grafted plants of this Rose; they are almost as useless as grafted Raspberries would be. The suckers pushed up from below the soil every year are the life of this Rose.

London. *W. Watson.*

Cultural Department.

Vegetable Notes.

We have tried a number of the round-seeded early Peas, but find none better than Alaska. Besides being as early as the earliest, it is, like all blue-seeded varieties, superior in flavor and makes a better appearance on the table. Kentish Invicta resembles it, but is a few days later. If sown when Alaska is above ground it comes in just right for succession. The only value round-seeded Peas have is their earliness. The wrinkled varieties are always preferred on account of their superior table qualities. Nott's Excelsior and the Chelsea, among dwarf kinds of the American Wonder type, are the best we have grown. Passing to bush wrinkled varieties, in point of earliness Station Pea has proved a worthy successor to the old Alpha. This variety of late years has been uncertain. Without doubt, Horsford's Market Garden and Bliss's Abundance are the two best early midseason Peas of medium height. Juno follows them about ten days, and even in date with Champion of England. No word of praise is necessary for old Champion of England, still the standard of excellence among large green-seeded kinds. It is always good.

We have again followed the transplanting system for our Onion crop in preference to sowing the seed in drills, and we are more convinced than before that it is the best plan for private places. Half an ounce of seed sown in a box in the greenhouse or in a hot-bed in February (or even in the autumn and held over in cold frames) will, when transplanted into flats and hardened in cold frames, plant quite a large plot. A foot apart for the rows and three inches between the sets is a good allowance for distance; and if the ground is rich the onions will be exceptionally large. Prizetaker is an excellent

red-skinned variety; Southport Yellow Globe is also a splendid onion. Large onions are not always in demand. Small varieties ripen early and make a convenient size for boiling. Adriatic Barletta is a very good small onion, and sown thickly in drills it comes in splendidly for pickling.

The Mohawk is a very early and hardy Snap Bean. It is flat-podded, and, like all of this kind, is not equal in table qualities to the round-podded varieties, which are not so hardy. We have a new one, the Warwick, which bids fair to rank high in quality for an early bean. The Lyonnaise is also new to us. It is a poor, rambling grower, and not very prolific, but the beans are of excellent quality. To those who prefer a wax bean, the Valentine Wax is a splendid article.

Strawberries have had a favorable season. None excel Bubach No. 5 in productiveness, or Triomphe de Gand in quality. Parker's Earle is healthy and wonderfully prolific. The berries have a sharp, pleasant flavor. It is probably the best all-round berry for family use. Salamander and Mignonette Lettuce stand better than any, and both make good solid heads.

Wellesley, Mass. *T. D. Hatfield.*

Fig. 40.—Oaks in the Churchyard at Paxtang, Pennsylvania.—See page 293.

A few Good Garden Plants.

Hesperis matronalis.—The many varieties of the Dame's Rocket, as this beautiful plant is often called, are well known to everybody. Not so the species itself, which, however, is both more attractive and graceful than any of its popular forms. It grows to a height of about two feet, bearing loose terminal racemes or panicles of violet-red flowers, which are very fragrant, especially in the afternoon and evening. The stems are slender and covered with bright green leaves from six to eight inches long, mostly lanceolate, radical ones stalked and largest, those of the inflorescence bracteate. It flowers late in spring, in May or June, and is especially effective when running wild in old gardens and orchards, or in groves and hedgerows. This is one of the most easily naturalized plants, and it increases rapidly by means of self-sown seeds where they are allowed to ripen. In the vicinity of New York it grows in certain parts of Bronx River Park, where it would rapidly spread and become a feature of the scenery if the flowers were not so persistently destroyed.

Campanula persicifolia.—This beautiful Bellflower grows wild in grassy and open deciduous woods in most countries of Europe. It delights in partially moist ground around springs and rivulets or on rocky hillsides, where it grows in scattered tufts among the grass. The species itself has pale blue flowers, but there is also a pure white variety common in a wild state. The stems are simple, bearing a few very large terminal and axillary flowers at the top. The root-leaves, which give the species its name, are broadly lanceolate, slightly acuminate; the stem-leaves, on the other hand, are quite small, linear-lanceolate, very dark green. There are double and semidouble varieties with white or blue flowers, common in gardens, but the species itself and its simple white variety are the best for general use. They may be grown in rich soil in thickets and shrubberies or in open spaces in woods. Both are readily increased by means of seeds, and should be raised in a nursery-bed to be planted out the second year.

Convolvulus tricolor.—This dwarf and floriferous annual deserves a more general culture, as it is one of our most beautiful summer-flowering plants. It is now seldom seen anywhere, and if reintroduced would be considered a novelty by many. For summer bedding several of the hardy annuals are far superior to many of the greenhouse plants grown for this purpose, and Convolvulus tricolor is among the best of them. The flowers are produced from the axils of the leaves in great abundance throughout the summer. The corolla measures nearly two inches across, the limb being of a beautiful blue, the throat bright yellow and the intermediate part pure white; the flowers are beautiful and effective. The leaves are chiefly ovate or spathulate on the lower half of the stem, rather thick and hairy. The stem grows a foot or more high, and when the plant is used for bedding purposes it should be pinned down to the ground so as to form a uniform mat of leaves and flowers. The seeds should be sown on the spot very early in spring.

Arnebia echioides.—Few hardy herbaceous plants are more

showy or desirable than this. It belongs to the Borage family, and is nearly allied to Lithospermum, and although very easy to grow it is comparatively rare, except in continental Europe. It is a native of Armenia, but, nevertheless, perfectly hardy far north. The habit is quite dwarf; it seldom grows more than a foot high, forming loose tufts which for a long time in summer are covered with the large pale yellow flowers marked with five black or maroon spots in the same manner as Nemophila maculata. They are about three-quarters of an inch in diameter and produced in loose terminal spikes. This species grows best in a half-shady position in rocky or gravelly soil. It may be grown with success in rockeries in the shade of light-foliaged trees. The propagation is best effected by cuttings of the root or by seeds or division. The seeds should be sown in a warm frame or cool greenhouse early in spring, and the young plants may be planted out permanently the same summer.

Streptosolen Jamesonii.—This is well known as a winter-flowering greenhouse plant, but it is an exceptionally valuable bedding plant also, producing an abundance of showy flowers throughout the summer if properly grown. By means of pinching it may be kept very dwarf and compact, the young shoots producing flowers constantly as long as a healthy growth is maintained. It is appropriate in beds in company of such plants as the Cupheas and Browallias. The plant will grow several feet high if not checked; it has rather small ovate, deeply veined, shiny green leaves and large terminal corymbose panicles of orange color, more or less suffused with scarlet. Streptosolon may be grown in the same manner as the well-known Cigar-plant (Cuphea platycentra); it is propagated in a cool greenhouse early in spring by means of herbaceous cuttings, which root freely. The plant will be most satisfactory if grown in a rich and moist soil in an open and sunny position.

New York. *N. J. R.*

Campanula rotundifolia.—Harebells swinging to and fro from invisible seams in rocky cliffs always charm the eye with their airy grace and exquisite color, and they are highly satisfactory for indoor decoration as cut flowers. No matter how wilted they may be they quickly revive in warm water, and every bud develops with conscientious fidelity, lasting for weeks with increased delicacy of color. For cultural use, however, as a house plant, Campanula rotundifolia is a failure; all its growth is twisted, distorted and abortive. When planted in a pot and set on a bracket for veranda use it is unsurpassed, for it will bloom there from the last of June, through the entire season, if the seed-pods are not allowed to mature. The marvelous strength and elasticity of the slender stems render them proof against summer gales, heat and neglect. In selecting plants for this use look around the sloping base of ledges where stray specimens have well-developed roots, and where their natural soil can be secured for potting. Harebells take kindly to artificial rock-work and will grow in any soil, but will not succeed with level culture; a certain freedom from the ground must be given, for the lovely plant revels in movement, and it needs the opportunity to sway "just as the breezes come and go."

Pittsfield, Vt. *G. A. Woolson.*

Seasonable Flower Notes.

SEEDS of Pansies to be used for bedding next spring should be sown now. We find the Lyonnaise Perfection a good strain at a moderate price. The flowers are large, and there is a considerable range of coloring. The seed should be sown lightly in drills. A good plan after sowing is to put a covering of light litter over the bed until the seedlings are up; this keeps the ground moist and also prevents the soil being washed when watering. All small seeds sown during summer-time come up better when treated this way. Myosotis alpestris should also be sown now. It is the best Forget-me-not for early spring flowering. In its native country, the Alpine regions, it is a perennial; with us it is little better than an annual, and for bedding purposes should be treated as such. Seedlings should be ready for transplanting by the end of August and put in nursery-beds about six inches apart. They will make good stools before winter sets in. M. palustris semperflorens is another good Forget-me-not well worthy a place in the spring garden. It is about two weeks later in blooming than M. alpestris. We used it as an edging to a bed of Silene pendula, and coming into bloom at the same time it made a very pretty contrast. This species is a true perennial, creeping and rooting as it goes. In a moist and rather shady situation it will continue in bloom all summer. S. pendula is among the showiest of spring bedding plants. It has often proved hardy with us unprotected, but whenever we have sown it in a cold frame and protected it as we do Pansies, not so much from frost as from alternate freezing and thawing, we have lost the greater part of our batch. We find we have better success by sowing in a box in the greenhouse in late January. Two or three hundred seedlings transplanted in boxes, and hardened on shelves in a cool house, may be put out into cold frames in March and bedded out when favorable weather comes.

Hybrid Primroses are among the most charming of spring-flowering plants. Years ago we had a large number of good varieties, which were used to decorate the spring garden. Although most effective when in bloom, they are not well adapted to the bedding system. When transplanted in spring their rather fleshy roots do not take hold of the soil quickly enough to support a somewhat ample leafage, so that whenever the sun shines directly upon the plants they wilt badly. They do best when permanently planted, and are very effective on moist shaded slopes. A few plants set out in the woods near a spring eight years ago bloomed abundantly this season. Our original lot are nearly all gone. They seemed to lose constitution by frequent removals, as when used for spring bedding they had to make way for summer bedding, to be moved back the following spring. We have raised a new lot this spring, and intend to set the plants in the autumn when summer bedding plants are past; there should thus be time for them to become established before winter sets in and they should stand better the coming spring. Along with the hybrid Primroses come plants of Primula Japonica. P. denticulata capitata and P. cortusioides will be tested for their value as spring bedding plants.

Foxgloves, Hollyhocks, Canterbury Bells and Sweet Williams are now ready to plant in nursery-beds. The two first-named make good pot-plants for piazza decoration, and with Deutzia gracilis, Astilbe Japonica and Chinese Hydrangeas make effective groups. These hardy plants have the advantage over tender plants in that they bear exposure better during the cool spring months than tender plants like Fuchsias and Pelargoniums.

Coreopsis Drummondii has proved a first-rate winter-blooming plant for cut flowers. In order to have good plants ready to take into the greenhouse when cool weather comes we sow a little seed now out-of-doors. Toward the end of the month a little good Mignonette-seed should be sown indoors for winter flowers.

Wellesley, Mass. *T. D. Hatfield.*

Hardy Plant Notes.

ONE of the handsomest hardy perennials in bloom at this time is Spiræa palmata. When in a favorable situation it increases rapidly and small plants quickly develop into bold, showy clumps. The most complete success is secured with the plant here only when it is set in a slightly damp place and a fairly rich soil, where it makes stems three or four feet high, which carry large broad clusters of rosy crimson flowers. If it is planted in the border it must be watered freely or it will make a miserable plant not much more than one foot in height. Our plants do nicely in a moist spot in the rock-garden, where they are shaded from the sun during the hottest part of the day. There is a good form of this plant with white flowers. A few weeks ago a bed ten feet in diameter of the American Goat's Beard, S. aruncus, was an imposing sight. This plant is the noblest and boldest of the herbaceous species belonging to this genus. It is of easy cultivation and readily accommodates itself to almost any situation or soil. Our largest groups of this plant are grown in an exposed position in good rich soil. They grow five feet or more high and produce large compound panicles of white flowers. Other plants grown under large Oak-trees, where they are shaded nearly all day, do not grow as tall as those in the open, but they blossom well and they have compact panicles of flowers. S. astilboides is a good Japanese plant that is perfectly hardy here and makes a good border plant. It is about two feet high and the whitish flowers are produced in stout, erect, spicate panicles.

Astilbe Chinensis is just beginning to open its flowers. It is a fine perennial, growing freely in a rich, moist soil. It has stout, erect panicles, two feet in height, of dull rose-colored flowers, which are held well above the dark green foliage. This species blossoms later than A. Japonica.

The Speedwells are excellent border plants, and from early spring until fall some species or good variety embellishes the borders or rockeries. Quite a number of species are blossoming now, the following the most distinct and decorative ones: Veronica incana, a distinct plant with silvery leaves, its flower-

stems from twelve to fifteen inches high, the blue flowers produced in showy racemes. V. longifolia, a common garden plant, showy and effective in bloom; it is about two and a half feet high and has long blue racemes of flowers; several distinct forms of this plant are grown here—one form has rose-colored flowers; another is pubescent, while another is glabrous. The best variety of this species blossoms a week or two later and is known as V. longifolia, var. subsessilis. V. spicata makes a neat and compact border plant, growing from one foot to eighteen inches high, and has a short, dense spike of bright blue flowers. The white-flowered variety of this species blossoms at the same time and makes a fine contrast with the numerous blue-flowered kinds. They thrive in a rich open soil and do best away from the shade of trees.

Salvia sylvestris makes a compact plant three feet high and has showy spikes of deep purple flowers which last in good condition for several weeks. S. numerosa is a stronger-growing plant with flower-spikes of a purplish color. S. Sclarea is a distinct species three feet high, and its stems are thickly clothed with long, ovate, wrinkled, hoary leaves. The flowers are in panicles and the corolla is of a bluish white color, while the calyx is white. In a sunny place in the border those Salvias grow freely. They produce an abundance of seeds, from which young plants are easily obtained.

The best of the Skullcaps in bloom now is Scutellaria Baicalensis, better known in gardens as S. macrantha. This plant is valuable, as it produces an abundance of dark blue flowers for many weeks during the summer months. It is a Siberian plant, about a foot in height, or slightly more, and has sessile, lanceolate obtuse leaves. The individual flowers measure about an inch in length and are borne plentifully in simple racemes. Near the edge of the border it makes a neat plant and grows easily in good enriched garden soil. The alpine Skullcap spreads quickly, but if kept within bounds it makes a showy plant. It is procumbent in habit and has short spikes of purple flowers. Another species well worth growing, having a neat habit and showy flowers, is S. scordifolia. The seeds of the plants now in bloom here were received from Sweden last year. It is like a good Brunella, but has much larger and more showy flowers, which are borne in a dense short spike. It is about a foot in height and grows either in a sunny position or in the shade.

Many of the Catnips are too weedy for ordinary border plants, but an exceptionally good one now in bloom is Nepeta macrantha. This is a handsome species, and has as showy flowers as some of the Pentstemons. The square stems are more than a yard high and sparsely clothed with opposite lanceolate serrated leaves. The flowers are in long loose racemes a foot in length. The corolla is the showiest part of the flower, and measures an inch in length and half an inch in diameter at the widest part, and is of a purplish color. N. grandiflora is the next showiest species of this genus now in bloom.

The Chinese Bellflower, Platycodon grandiflorum, has just begun to open its large bell-shaped flowers. This handsome plant has all the good qualities that a good hardy perennial plant requires. It has a good habit, with stout erect stems which need no support to keep them upright, and has clean healthy foliage, with large open showy flowers, deep blue, or sometimes nearly white. It is perfectly hardy and grows easily in any well-enriched garden soil. Our largest plants are about a yard high, but the height of the plants varies. The flowers are produced in clusters at the ends of the branches, but they do not all open at the same time. The flower measures from two to three inches in diameter. This Platycodon is easily raised from seed, and if sown early in spring the plants will blossom the first summer when they are about six inches high. This plant is also known as Campanula grandiflora, and is a native of China and Japan.

Botanic Garden, Harvard University. *Robert Cameron.*

The Best Dutch Bulbs.

THE Dutch Bulb Society lately took a vote on their choice of the best varieties of Hyacinths, Tulips, etc., with the following result:

Six white Hyacinths (single and double).—La Grandesse, Grandeur à Merveille, Mont Blanc, L'Innocence, Madame van der Hoop and Baron van Tuyll.

Six blue Hyacinths (single and double).—Grand Maître, King of the Blues, Charles Dickens, Queen of the Blues, Czar Peter and Regulus.

Six rose-colored Hyacinths (single and double).—Gigantea, Moreno, Noble par Mérite, Roi des Belges, Lord Macaulay and Gertrude.

Three Hyacinths, yellow and orange (single and double).—Ida, King of the Yellows and Sonora.

Three purple Hyacinths (single and double).—Haydn, Sir William Mansfield and Adelina Patti.

Twenty-four Tulips (early single).—Pottebakker (464 votes), La Précieuse, Keizerskroon, Vermilion Brilliant, Proserpine, Joost van Vondel, Rose Griselin, La Reine, Rosa Mundi, Chrysolora, Yellow Prince, Duchesse de Parma, Thomas Moore, Kanarienvogel, Wouverman, L'Immaculée, Duc van Thol (scarlet), Ophir d'Or, Zilveren Standaard, Nelly, Rose Luisante, Rembrandt and Gouden Standaard, with 189 votes.

Twelve Tulips (double).—Murillo, Tournesol, Imperator rubrorum, La Candeur, Salvator Rosa, Tournesol (yellow), Rose Blanche (see colored plate *Revue de l'Horticulture Belge* of June 1st), Rex rubrorum, Vurbaak, Mariage de ma fille, Alba maxima and Raphael. The first had 461 votes, the latter 198 votes.

Correspondence.

The Oak Pruner.

To the Editor of GARDEN AND FOREST:

Sir,—I have at my home in Auburndale a beautiful Oak afflicted by some disease which causes the small branches to fall to the ground. Can you tell me what the matter is and suggest treatment?

Boston. *E. P. S.*

[Our correspondent's Oak is afflicted with the larvæ of the Oak Pruner, Stenocorus putator, which is unusually abundant this year in the neighborhood of Boston. In its adult state it is a slender long brown beetle, sprinkled with gray spots, and varies from four and a half inches to six-tenths of an inch in length. It lays its eggs in July, each egg being placed close to the joint of a leaf-stalk or of a small twig near the end of a branch of an Oak-tree. The grub hatched from the egg penetrates the following season to the pith of the branchlet and continues its course toward the body of the tree, and by devouring the pith forms a cylindrical mine several inches long in the centre of the branch. Having reached its full size it cuts off the branch at the lower end of its burrow by gnawing away the wood from within, leaving only the ring of bark untouched; then, retiring backward, it stops up its hole in the transverse section with the fibres of the wood and awaits the fall of the branch, which is broken off and precipitated to the ground by a slight breeze. The presence of the grub is not discovered until the branch falls, and there is nothing to do but to gather up the branches as fast as they fall and burn them, and in this way prevent the spread of this pest.—ED.]

In the Mountain Trails.

To the Editor of GARDEN AND FOREST:

Sir,—I have just returned from a three-weeks' drive through the same mountain region near here where we had journeyed ten years ago, and I remember that we then considered the popular novelist's pictures of the moonshine regions and picturesque backwood characters had not been overdrawn. Such utter shiftlessness and entire absence of concern for anything beyond the merest animal existence could only be conceived by one who had passed the windowless huts from which poured out droves of half-naked, shock-haired children, "jest fer to see the stranger"; the few weedy fields, almost hidden from sight by the brush in the fence corners; the scrub cows and razor-backed hogs that never saw pasture or pen; these, together with the absence of schoolhouses and churches, told of the general do-nothingness of the population.

But ten years have wrought great changes, and during a drive of more than four hundred miles through one of the most out-of-the-way regions in America, we saw but a half-dozen windowless houses and fewer barefooted women. We saw orchards dotting the hillsides, enclosed yards about most of the houses, and not a few comfortable and roomy dwellings, built with some faint pretensions to beauty. In the larger valleys there was a sprinkling of fairly well-tilled farms, and a growing taste for the beautiful as expressed in occasional shrubbery and flowers.

This last surprised us above all else. Ten years before we had observed almost no attempts at flower-gardening, and there are still some districts with no flowers but the wild ones,

and many more where the attempts at ornamental gardening are of the crudest. Nevertheless, the growing taste in this direction was marked. It was interesting to observe the evolution of the flower-garden. The first plant cultivated was inevitably a Zinnia, the next was usually a Castor-bean, and after these a considerable variety was seen about the more ambitious houses. I never saw as many Zinnias before, nor such poor ones. If there are any who have a passion for Zinnias, these enthusiasts would have their love put to a severe test if compelled to gaze for three weeks, as we did, at ragged single Zinnias, dull in color and shaggy in outline. We passed at least a hundred homes where the sole flowers were these forlorn, neglected things that had less beauty than the Mullein by the roadside. Nevertheless, some one had sowed them, some one had hoed them, some one had taken pleasure in them, and it may be that they will be forerunners of much garden beauty in the future. If so, welcome even the Zinnia.

Uncle Sam sends his mail-bags everywhere. On the roughest mountains we passed the carrier with mail-bags thrown over his saddle, or met the faster stage with the familiar letters, "U. S. Mail," painted in great letters upon the sides. The catalogues that our florists scatter broadcast all over the land in this way bear fruit even in this unpromising field. Once we were treated to a genuine surprise. We had been riding over roads so rough as to be almost impassable, and for two days we had scarcely seen an excuse for a flower, save those of Nature's planting. Suddenly we came to a house surrounded by a wide lawn. Long beds and borders were ablaze with scarlet and pink Geraniums, and gay Balsams, Heliotropes, Asters and Marigolds, and we stopped the horses to look long at the tempting beauties displayed by some one who is doing true mission work in teaching order, industry and love of the beautiful.

On the whole, therefore, the incipient efforts at ornamental planting, though small and weak, are yet encouraging in this remote and mountain-locked region, and, no doubt, the time is coming when the wilderness and the solitary place shall be glad, and the desert shall blossom as the Rose.

Pineville, Mo. *Lora S. La Mance.*

Hardiness of Southern Pine.

To the Editor of Garden and Forest:

Sir,—About three years ago I obtained from North Carolina a dozen young plants of Pinus palustris and set them out in the spring. Unfortunately but one survived the transplanting, but your readers may be interested to know that this has proved quite hardy here where it has stood out for two winters, with no protection whatever, and has suffered no harm. Among other plants which are usually considered too tender for our winters, Ilex crenata, from Japan, has proved perfectly at home here, so has Skimmia Japonica, a broad-leaved, slow-growing evergreen. Magnolia grandiflora loses its foliage nearly entirely every winter, but the branches are always unhurt. For general planting it is never worth while to use trees or shrubs which are not sure to thrive, but it is interesting occasionally to have specimens of some striking sorts outside of the limit of their assured hardiness. Thus, Aucuba Japonica can usually be trusted here out-of-doors, and so can the beautiful Crape Myrtle, Lagerstrœmia Indica.

Germantown, Pa. *Joseph Meehan.*

Winter Protection for Bush Fruits.

To the Editor of Garden and Forest:

Sir,—There are, perhaps, a dozen essential factors that go to make up the conditions of success with any one crop. But if one of these factors chances to be neglected, instead of reducing the resulting crop one-twelfth, as might seem to be the case, it may reduce it to zero. As if this were not enough, there is still the cost of production to be deducted. In other words, while the faithful observance of any one essential factor will not insure success, the neglect of any one may bring absolute failure. The Blackberry bushes on the Nebraska Experiment Station farm present a striking example of this truth at the present time. The past winter has been one of the mildest ever experienced in this section, yet rows of Taylor Blackberry, left uncovered for comparison, are killed to the ground, the canes presenting one continuous row of brown, until the new shoots sprang up from the root. Rows right beside these, which were laid down and covered with earth for protection, are alive and plump throughout and throwing out vigorous leaves and promises of fruit. In this case it is evident that while laying down and protecting the canes does not insure a crop, the neglect of it does insure failure.

It is instructive to note in this case that it is not severe cold that causes the death of the canes, since the lowest point reached at any time during the winter was only five degrees below zero in January, and in no other month did it fall below zero. Comparing this with the temperature which the Taylor Blackberry endures in the eastern states, it will be readily seen that the injury must be assigned to some other cause. The most probable reason seems to be the excessive dryness of the soil and atmosphere during the winter months. Little rain or snow falls, as a rule, during this time, and uncovered canes are almost continuously exposed to drying winds. Even the winter protection afforded by laying down and covering did not suffice to bring the Red Raspberries through in such condition as to promise a crop, although the effect was noticeable in the greater proportion of living wood. The fate seems to be the same every winter so far as injury to uncovered canes is concerned. Heretofore none have been laid down, and the result has uniformly been a complete failure. It may be added, that having thus guarded against the drying winds of winter the even more trying ones of summer are to be encountered, and the problem of counteracting these is as yet largely unsolved.

Lincoln, Nebraska. *Fred W. Card.*

Kansas Wild Flowers.

To the Editor of Garden and Forest:

Sir,—The hillsides and prairies of Kansas are decked with many beautiful flowers from April until October, and I have selected for notice a few which I think would be of the most interest to those who grow flowers for pleasure or profit. All of them are confined almost exclusively to the west and may be called Kansas plants. Some of them have been cultivated, but not to any great extent that I know of. I have seen a few in cultivation here, but for the most part their adaptability to cultivation in other localities is yet to be tested. All of the plants mentioned I value in the natural state, but many of them could, doubtless, be improved by cultivation and selection.

Anemone Caroliniana is a small daisy-like flower which dots the smoother prairie pastures with red, white and blue flowers early in the spring.

Callirrhoë involucrata is usually found in sandy soil, and with its large reddish-purple mallow-like flowers and much cut leaves spread out on the ground gives the bottom-lands a very attractive appearance. [This plant is quite common in eastern gardens, where it blooms all summer, and springs up from self-sown seed year after year.—Ed.]

Amorpha canescens, the Lead-plant, one of our small shrubby prairie plants, has been cultivated to some extent and is very attractive when in full flower. It is much branched from the root, and the fine compound leaves, covered with a gray pubescence, contrast well with the dense purple spikes of flowers with their golden-yellow stamens. [See vol. vii., p. 275.—Ed.]

The Œnotheras, or Evening Primroses, are very abundant here and produce some of our largest flowers. Professor F. A. Waugh has already described them so fully that I will only call attention to his article in vol. viii., p. 253.

Gaura coccinea is a low-branching plant, six to twelve inches high, and bearing a profusion of small rose-colored or scarlet flowers, which have a pink-like fragrance. It is found in the more sandy bottoms.

Mentzelia ornata is one of the most showy of Kansas flowers, where it grows on the rocky hills of the western part of the state. The flowers somewhat resemble those of the Night-blooming Cereus; they open in the afternoon and evening, expanding their yellowish white petals some three inches. The plant is often called here the White Mound Lily.—[See vol. vi., p. 63.—Ed.]

Townsendia sericea is one of the earliest composites of the state. The low plant is almost stemless, and the large white or pinkish flowers are almost on the ground on the hilltops which they adorn in April.

Helianthus petiolaris, the Sand-hill Sunflower, is one of the prettiest Sunflowers of the Sunflower state. It is much like the too common H. annuus, but more graceful, smoother, and the flowers are smaller and brighter.

Asclepias speciosa bears the largest flowers of any of our Milkweeds. It is a large-leaved, white, woolly plant with showy drooping umbels of purple flowers of the peculiar Milkweed form. It has a heavy sweet fragrance like most of the species of Asclepias.

Ipomœa leptophylla, the bush Morning-glory, is a peculiar and beautiful plant. Unlike most of our Ipomœas, it is an

upright, branching, shrub-like perennial, growing from an immense woody root weighing from ten to one hundred pounds. The flowers are a pink-purple and about three inches long.—[See vol. vii., p. 436.—ED.]

Euphorbia zygophylloides is much like E. petaloides of the east, but is more densely and finely branched and covered with small white or pinkish flowers, which are useful for cutting, like those of E. corollata, or Gypsophila paniculata, to mingle with larger ones of a more positive color.

State Agricultural College, Manhattan, Kan. *J. B. S. Norton.*

Notes from West Virginia.

To the Editor of GARDEN AND FOREST:

Sir,—Our little collection of shrubs and trees embraces nearly five hundred species and varieties, and, although at this season comparatively few of them are in bloom, yet I find that one can still gather from them large and beautiful bouquets for the decoration of the house and table. A vase in my room is filled with branches of white Althea, or Hibiscus Syriacus, and another is decorated with the graceful white plumes and pinnate foliage of Osbeck's Sumach, Rhus semi-alata, var. Osbecki, just coming into flower. This Sumach is not a shrub, but a tree of very rapid growth, and bids fair to attain a large size. Planted five years ago it is now fifteen feet in height, the main stem divided into two near the ground. It is very attractive at this time because of its conspicuous bloom and semi-tropical appearance, but will be even more beautiful in the fall when it puts on its lively coloring of red and orange. [Osbeck's Sumach is not yet in flower in the latitude of New York. It is a hardy and shapely tree here, but as there are no leaves on its larger branches it has not a compact appearance. It has also the drawback of throwing up suckers even at a considerable distance from the trunk. Its late period of flowering gives it a distinct value, but in limited collections there are trees which are preferable to it for general purposes.—ED.]

Parrottia Persica is now a beautiful young tree ten feet in height, clothed to the ground with dense and very elegant foliage. It is one of the finest specimen plants we have. Unfortunately, a web-worm has found it out, while its near relative, our native Witch Hazel, is untouched. It may be added that its flowers are not conspicuous, but that its autumn coloring is quite as brilliant as that of our native small trees. Although it comes from southern Europe, it is quite hardy as far north as New England. The Fontanesia spoken of some time ago is more attractive now than when in bloom, as every twig is furnished with small light green carpels, which contrast prettily with the darker green of the narrow leaves. Near-by, Callicarpa Japonica is showing numerous small clusters of light pink flowers, very freely produced, and these will be succeeded by curious mauve-colored berries more showy than the flowers.

The wild garden is bright with tall red and yellow Lilies, masses of light blue and pure white Funkias and many other handsome flowers. Heliopsis Pitcheriana planted in a fence corner is a cheerful sight with its large, bright yellow flowers in generous profusion. This wild garden has a distant background of pink and white, double and single flowering Altheas, or Hibiscus Syriacus, with showy blossoms nestling amid the cool green of their varnished foliage. In the foreground many Platycodons with their blue and white blossoms mingle with the Lilies and make a fine display. Here a tall, well-grown plant of Cassia Marylandica is at home and has attractive compound foliage and yellow flowers in axillary racemes and terminal panicles. It is four feet in height and comes up from the root every spring, only blooming in wet seasons. It grows in a wild form in our marsh, where it blooms profusely every year. The bright blue flowers of Lady Larpent's Plumbago, Ceratostigma plumbaginoides, are beginning to show themselves at the foot of the Spiræa Anthony Waterer, which is still blooming profusely. The ground in this wild garden is partly covered with Asperula agurea setosa, a delicate little annual, not showy, but very lovable with its clusters of small light blue flowers and refreshing perfume. Near-by is a blooming mass of lemon-scented Thyme, another inconspicuous plant whose fragrance gives it value.

Shepherdstown, W. Va. *Danske Dandridge.*

Recent Publications.

The Nut Culturist. Illustrated. By Andrew S. Fuller. New York: Orange Judd & Co.

It is a pity that Mr. Fuller did not live a few months longer to see the publication of a book which he has had in preparation so many years. He was certainly one of the pioneers in observing and experimenting on what is now recognized as an important subject, and which is destined to become, beyond doubt, an extensive industry in this country. Even now, however, the practical knowledge which we have of propagating our native nut-trees is not very large, but Mr. Fuller was the leading authority on this matter in the country while he lived, and his writings have done much to encourage experiments in the way of securing and planting improved varieties of our native nut-trees and of such imported species and varieties as can be grown profitably in this country.

This compact little treatise of 390 pages contains separate chapters on the almond, the beech-nut, the castanopsis, the chestnut, the hazel-nut, the hickory-nut and the walnut, and then there are brief accounts of many other miscellaneous nuts which are either found in the country or in our markets. Mr. Fuller believes that the best known of the walnuts—that is, the Madeira nut or Persian walnut, which has been in cultivation for many centuries in different countries and climates—can be grown with a little care in our eastern states as easily as our native butternuts. There are now acclimated specimens growing here and there which are hardy and productive, and from seedlings or scions of these we can experiment until we have a strain which would be perfectly trustworthy in this climate. A comparatively large space is given to the different varieties of hickory-nuts, including the pecan, and Mr. Fuller advocates the planting of Hickories as roadside trees, because they are quite as ornamental as any other trees and yield abundant crops. Indeed, in the introduction of his book Mr. Fuller makes a long argument in favor of using nut-trees for roadside planting. He sees no reasonable excuse for planting miles of Elms, Maples, Ashes, Willows and Cottonwoods by the roadside, where the Shellbark Hickory, Chestnut, Black Walnut, Pecan and Butternut would thrive equally well, yielding in addition bushels of the richest nuts and increasing in productiveness for one, two or more centuries. Mr. Fuller himself states that when young he selected the popular shade-trees, all of which flourished, and when they were twenty years old they began to be admired for their beauty, although their roots robbed the soil of the adjacent fields considerably. When his trees had become thirty years old the best of them were probably worth $2.00 apiece for firewood, or $1.00 more than the nurseryman's price at the time of planting. If he had set nut-trees forty feet apart he would have had 130 trees in every single row a mile long, or twice as many, counting both sides of the road. With a hardy strain of Persian Walnuts, with Hickory-nuts as good as those borne by Hale's variety, or with American or foreign Chestnuts grafted to good varieties it would be safe to count on a hundred bushels for a double row of trees a mile long at twenty years from planting, and this would mean a considerable present income, with the promise of an increasing supply for a hundred years. There are some disadvantages in the use of nut-trees for planting in the street, it is true, and yet we are inclined to think that Mr. Fuller's argument is fundamentally sound, especially as there is a steady increase in the demand for good nuts, and the best American nuts have increased largely in value during the last three or four decades.

The book is illustrated with helpful cuts, and having been issued so soon after the publication of the monograph on the same subject by the Agricultural Department at Washington this long-neglected subject ought now to begin to attract that attention which its importance demands.

Notes.

Perhaps the showiest of the Milkweeds about here is Asclepias tuberosa, which is now conspicuous with its deep orange flowers, but some of the other species, like A. rubra, are also worth a place in the hardy plant border.

Spiræa Anthony Waterer, like all varieties of this type, has a disagreeable dead-and-alive look if the flowers are allowed to wither and go to seed. The proper way to treat this shrub is

to cut off each flower-cluster as soon as it has begun to fade, and then the plant will continue to show its rosy pink bloom until autumn.

One of the largest Oak-trees in this country, says *Meehans' Monthly* for July, is a Red Oak in a forest of Pemiscot County, Missouri. The straight trunk of this tree, recently measured by Colonel George B. Bowles, of Affton, St. Louis County, has a circumference of twenty-seven feet near the ground and nineteen feet eight feet above, and is clear for sixty feet to the first limb.

The receipts of new southern potatoes at this season have been smaller in this city than the average for the past five years, and yet the prices have been lower than they ever were, partly because there were so many old potatoes on hand when the season began, and partly because there has been a light call for them in that part of the country which receives its supplies from this market. Good sound potatoes sell for sixty cents a barrel, fair ones bring no more than fifty cents, and poor ones even less, which means that the season has been a disastrous one to the southern potato grower.

Although Coreopsis grandiflora and C. lanceolata are native plants, they were rarely seen in gardens until a few years ago. They are beautiful in a wild state, but they grow much more vigorously when well cared for. A mass of either of these plants will beautify any garden by the wonderful profusion of their long-stemmed clear yellow flowers. They are so easily produced that no garden should be without them. Another indispensable plant is the old-fashioned Lychnis Chalcedonica, which was once more common than it now is in country gardens. Its flat clusters of flowers of the most vivid scarlet make a conspicuous feature at this season in the hardy herbaceous border.

The authorities at Kew experienced considerable difficulty at first in making Lilium giganteum at home there, but it finally has found exactly the conditions it likes in the Bamboo garden, where it seems to be permanently established and naturalized. Not only do the soil and situation suit the plant, but nothing could be more effective in appearance than the tall and stately spikes of great white flowers amid the feathery masses of the Bamboo. It ought to be added that, besides these Lilies, there are enough other flowering plants here to emphasize by their contrast the beauty of the noble Grasses, so that the Bamboo garden is really one of the most attractive spots in the gardens at Kew.

According to *The Country Gentleman*, Mr. Schuyler Worden is still living in the village of Minetto, Oswego County, New York, at the age of nearly ninety years. It is more than thirty-five years ago since he planted a quantity of seeds of the Concord Grape, and it was the most vigorous of these seedlings which is the parent of the widely distributed variety known as the Worden. It was not placed in the hands of nurserymen for introduction, and for many years it was spoken of slightingly and said to be nothing more than the ordinary Concord, and thousands of Concord vines were sold as genuine Wordens. In recent years, however, the Worden has taken its true position as one of the very best of black grapes. The original vine is said to be still growing where it was first planted.

The first horticultural school for women in Germany was opened at Friedenau, near Berlin, in the autumn of 1894, and it will graduate its first class of seven members next fall. One of the graduates will then assume the position of teacher in a similar school recently established at Riga, in Livonia. On the first of October next still another institution of the kind will be opened on the estate of Baroness Barth-Harmating, near Plauen, in Saxony. The courses of study extend over two or three years, and include not only the various branches of horticulture, but also fundamental scientific instruction and such knowledge of business methods as is needed for the successful prosecution of commercial gardening. Emphasis is laid upon the fact that the new work thus made possible for women is suitable for those of the cultivated classes, and not for uneducated or semi-educated rustics.

At the midsummer meeting of the Minnesota State Horticultural Society much time was given to the discussion of plans for forest development and protection, and the proposition of Captain Cross, of which we have already made mention, to make the state a trustee of the cut-over Pine-lands, was endorsed and a resolution in favor of an enactment by the next Legislature to this effect was adopted. It was also resolved that encouragement be given to the project of setting apart a small area of well-timbered state lands to be operated by the University according to the best systems of forestry, for the purpose of illustrating the advantages of good forest management. In other words, according to Mr. H. B. Ayres, who introduced the resolution, an effort ought to be made to demonstrate that good forest management when applied to well-wooded lands is more profitable than the present method of lumbering.

In the earlier volumes of Garden and Forest we spoke of the value of the Japanese Rosa multiflora and published a portrait of it in vol. iii., page 405. Although it was described by Thunberg more than a hundred years ago it was only recently brought into cultivation, but within the last few years it has been disseminated extensively throughout this country from the Arnold Arboretum, where it was raised from seed sent by Herr Max Leichtlin as long ago as 1874. It is rather remarkable that this plant, like the Cherokee Rose, another native of eastern Asia, has been thoroughly naturalized in some parts of the southern states for a long time. Dr. Carl Mohr writes us from Mobile, Alabama, that it has been established in that section for three generations at least, where it grows quite as luxuriantly as the Cherokee Rose, and keeps its hold of the soil more firmly when it once gets possession. The southern plants seem identical with those raised in the Arboretum, except that the flowers vary from rose-color to almost pure white. A figure in the *Botanical Magazine* also represents the petals as pink or slightly shaded with pink, but the plants raised in the Arboretum all bore pure white flowers. So far as we know there is no record of the introduction of this plant into our southern states, and, perhaps, the time and manner of its arrival will remain a mystery as profound as that which shrouds the introduction of the Cherokee Rose.

The *Revue de l'Horticulture Belge* reports an interesting case at law which was tried before the Tribunal of Commerce at Bruges, in which Monsieur Vincke brought action against Messrs. Sander & Co. for one thousand francs, the price of a plant of Cypripedium Harrisianum in flower, which, when purchased, showed remarkable coloring. Next year, however, when the plant bloomed the flowers were of the ordinary character, and, therefore, the Messrs. Sander claimed that it was according to the custom of trade for the vender of a plant to guarantee the existence of special characteristics. Mr. Vincke held that there was no such guarantee, that the plant was bought in flower as it stood and that the Messrs. Sander took the risk of the variety being a permanent one. The court held that since the plant was offered without stipulation or without any guarantee that the color of the bloom was fixed, and that since there was no concealment or attempt to deceive, the conditions did not justify the annulment of the contract. Since hybrids and their offspring are specially prone to vary, and this is true of Chrysanthemums, Roses and other commercial flowers as well as of Orchids, buyers under this decision always take some risk. What the practice of the trade is in this country when new varieties are sold we are not able to state, but we never knew a novelty which was guaranteed by the seller to retain the special character which made it valuable.

Pears and plums made up most of the forty-six car-loads of fruit which arrived at this market from California last week, and the different colors of the plums and prunes now on the fruit-stands make them very attractive. The apricot yellow of Prunus Simoni, the light purple of Royal Hative, the salmon of the Peach, the yellow and purple of Kelsey's Japan with its rich bloom, the cherry-red of the Burbank, the darker red of the Satsuma under its thick bloom, the yellowish green of the Washington, the reddish purple of the Duane with its lilac bloom, the still deeper purple of the Tragedy, all these tints and many more make a feast for the eye, while in addition to their beauty the fragrance of this fruit, with that of the peaches and pears, apples and apricots which are still occasionally seen, makes another distinct attraction. These plums and prunes are bringing fair prices, but California peaches have now to come into competition with those from Georgia and meet with a slow sale. A few peaches are coming from Delaware and Maryland, but the best now, and these are fairly good, come from Georgia and South Carolina. Moore's Early, Delaware and Niagara grapes are coming from as far north as North Carolina, many of them immature and sour. Perhaps a well-ripened Niagara grape would taste well in midsummer, but somehow we associate their best flavor with cooler nights and they seem like an anachronism. Nyack Pippins, Sweet Bough and Astrachan apples, when hand-picked, are worth from $1.50 to $2.50 a barrel. Le Conte pears, from Florida, are worth $3.00 a barrel, and Bartlett pears of full size and fair color, from California, sell for $2.00 a box.